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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/824,336

Applicant(s)

COLBERT ET AL.

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) 24-53 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :10/26/05,8/15/05,8/3/05,10/6/04.

DETAILED ACTION

1. Please note that the examiner of record has been changed. The new examiner is Callie Shosho.

Election/Restrictions

2. Applicant's election of Group I, claims 1-23 in the reply filed on 2/22/07 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

3. Claims 24-53 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected inventions, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 2/22/07.

4. With respect to applicants' request to examine claims 51-53 together with claims 1-23, i.e. rejoin Group I and Group IV, it is noted that the examiner's position remains that the invention of Group I and the invention of Group IV are independent or distinct for the reasons set forth in the Restriction requirement of the office action mailed 1/30/07.

Information Disclosure Statement

5. It is noted that "Norme Francaise, Methode de Determination d'absorption d'eau", "A Marquer D'Une Pierre Blanche", "Pregyplace Deco la nouvelle plaque blanche", "Plaques de

Platre”, “Papier, Cartons et Pate”, “Plaque de Parement en Platre”, and “Travaux de Peinture des Batiments” have each been stricken from the IDS filed 8/15/05 given that the references fail to comply with 37 CFR 1.98(a)(3). Specifically, applicants have not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of the references which are not in the English language.

6. It is noted that 4 Walocel M Delivery Programme has been stricken from the IDS filed 8/15/05 given that there is no disclosure of the date of publication of the reference.

7. Application No. 10/824,193, 10/823,428, and 10/823,419 have each been stricken from the IDS filed 10/6/04 since these applications are not available to the public. However, each application has been considered and the “Search Notes” of the instant file wrapper has been annotated to this effect.

Double Patenting

8. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

Claims 1-4, 6-7, and 9-13 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-4, 6-7, and 9-13 of copending Application No. 10/823,428. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

The present claims and the claims of 10/823,428 disclose the same invention given that both disclose coating formulation for drywall application comprising water, a binder, a filler comprising at least 60% by weight or at least about 75% by weight CaCO_3 , and noncellulosic thickener wherein the coating further comprises a dispersant, about 0.1 to about 20% by weight anti-cracking agent that is mica and about 0.1 to about 5% by weight workability agent that is clay, and wherein the binder is an acrylic latex binder, the dispersant is a sodium polyacrylate, the thickener comprises a copolymer of an acrylic acid and an acrylic ester, and the filler further comprises magnesium carbonate, dolomite, gypsum, anhydrite, or mixtures thereof.

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined

application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. Claims 5 and 8 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 5 and 8 of copending Application No. 10/823,428. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/823,428 coating formulation for drywall application comprising water, about 0.5 to about 15% binder, a filler comprising at least 60% by weight or at least about 75%

by weight CaCO_3 , and about 0.05 to about 50% noncellulosic thickener wherein the coating further comprises about 0.5 to about 15% dispersant, about 0.1 to about 20% by weight anti-cracking agent that is mica and about 0.1 to about 5% by weight workability agent that is clay, and wherein the binder is an acrylic latex binder.

The only difference between copending 10/823,428 and the present claims is that the present claims disclose formulation comprising about 0.5 to about 30% by weight of a latex binder while the corresponding copending claims disclose formulation comprising about 0.5 to about 15% by weight of a latex binder.

However, it is noted that the amount of latex binder disclosed in copending 10/823,428 overlaps and falls within the amount claimed amount. Thus, it would have been obvious to one of ordinary skill in the art that the narrow amounts of latex binder disclosed in copending 10/823,428 overlap and fall within the broad amounts presently claimed.

In light of the above, one of ordinary skill in the art would have arrived at the present invention from the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

11. Claims 14-23 provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 14-23 of copending Application No. 10/823,428. Although the conflicting claims are not identical, they are not patentably distinct from each other because of the following explanation.

Copending 10/823,428 disclose coating formulation for drywall comprising about 0.5 to about 15% by weight of a latex binder, about 40 to about 70% by weight of a filler comprising at least about 60% or at least about 70% CaCO_3 , about 0.5 to about 15% by weight of a dispersant, about 0.5 to about 50% by weight of a noncellulosic thickener, and water in an amount sufficient to provide a viscosity for the formulation of about 300 to about 450 cps wherein the formulation further comprises about 0.1 to about 20% by weight anti-cracking agent that is mica and about 0.1 to about 5% by weight workability agent that is clay and wherein the binder is an acrylic latex binder, the dispersant is a sodium polyacrylate, the thickener comprises a copolymer of an acrylic acid and an acrylic ester, and the filler further comprises magnesium carbonate, dolomite, gypsum, anhydrite, or mixtures thereof. In another embodiment, copending 10/823,428 discloses formulation comprising about 1 to about 4% by weight of a latex binder, about 45 to about 65% by weight of a filler comprising at least about 60% CaCO_3 , about 2 to about 9% by weight of a dispersant, and about 1 to about 5% by weight of a noncellulosic thickener.

The only difference between copending 10/823,428 and the present claims is that the present claims disclose formulation comprising about 0.5 to about 30% by weight of a latex binder (claim 14) or about 0.5 to about 15% by weight of a latex binder (claim 18) while the corresponding copending claims disclose formulation comprising about 0.5 to about 15% by weight of a latex binder or about 1 to about 4% by weight of a latex binder.

However, with respect to the present claim 14, it is noted that the amount of latex binder disclosed in copending 10/823,428 overlaps and falls within the amount claimed while with respect to present claim 18, it is noted that the amount of latex binder disclosed in copending 10/823,428 completely falls within the amount claimed. Thus, it would have been obvious to one

of ordinary skill in the art that the narrow amounts of latex binder disclosed in copending 10/823,428 either overlap and fall within or fall within the broad amounts presently claimed.

In light of the above, one of ordinary skill in the art would have arrived at the present invention from the copending one.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

13. Claims 1-2, 6-7, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by DE 4324315.

Pending a formal translation and using a machine translation of the reference, it is noted that DE 4324315 discloses coating for gypsum board wherein the coating comprises 0.1-2% fibers, 2-8% film-forming binder that is acrylate polymer dispersion, 60-80% pigment that is calcium carbonate, 0.1-2% thickener such as silica or polyurethane, and dispersant (page 1 (description), paragraphs 7, 9, 10 and page 2 (description), paragraphs 2-5 and 8).

In light of the above, it is clear that DE 4324315 anticipates the present claims.

14. Claims 1-2, 6, and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Caldwell et al. (U.S. 5,869,166).

Attention is drawn to col.3, lines 15-33 of Caldwell et al. that disclose coating composition comprising water, 0.56% sodium polyacrylate dispersant, 72.44% calcium carbonate, 0.17% thickener that is acrylic emulsion known under the tradename TT-615, and 16.25% binder. Given that the thickener, i.e. TT-615, is identical to that utilized in the present invention, it is clear that such thickener inherently comprises copolymer of acrylic acid and acrylic ester as presently claimed.

There is no disclosure in Caldwell et al. that the coating is for drywall application. However, the recitation in the claims that the coating formulation is “for drywall application” is merely an intended use. Applicants attention is drawn to MPEP 2111.02 which states that intended use statements must be evaluated to determine whether the intended use results in a structural difference between the claimed invention and the prior art. Only if such structural difference exists, does the recitation serve to limit the claim. If the prior art structure is capable of performing the intended use, then it meets the claim.

It is the examiner’s position that the intended use recited in the present claims does not result in a structural difference between the presently claimed invention and the prior art and further that the prior art structure is capable of performing the intended use. Given that Caldwell et al. disclose composition as presently claimed, it is clear that the composition of Caldwell et al.

would be capable of performing the intended use, i.e. for drywall application, presently claimed as required in the above cited portion of the MPEP.

In light of the above, it is clear that Caldwell et al. anticipate the present claims.

15. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Podlas (U.S. 5,102,462).

Podlas discloses coating for wallboard wherein the coating comprises thickener that is crosslinked polyacrylic acid, binder latex, limestone, i.e. calcium carbonate, and water (col.1, lines 6-8, col.2, lines 3-9, and col.4, lines 14-19 and 37-45). Attention is drawn to example 2 of Podlas et al. that disclose coating comprising 61.5% limestone, 2% clay, 3% latex binder, 2.5% mica, and 0.5% thickener comprising 4% polyacrylic acid.

In light of the above, it is clear that Podlas anticipates the present claims.

16. Claims 1 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Attard et al. (U.S. 5,336,318).

Attard et al. disclose coating for wallboard wherein the coating comprises 50-95% calcium carbonate, 0.1-2% in situ/associative thickener that is acidic acrylate copolymer such as ethyl acrylate/methacrylic acid copolymer, 1-7% binder that is latex emulsion, 0.05-5% starch binder, 2-15% mica, and water wherein the coating possesses viscosity of 400-700 Brabender units, i.e. centipoise (col.1, lines 12-32, col.3, lines 20-45 and 57-63, col.4, lines 1-4, 24-33, 57, and 64-66, and col.6, lines 7-15). Attention is drawn to example 6 of Attard et al. that discloses coating for gypsum wallboard wherein the coating comprises 79.15% calcium carbonate, 0.4%

thickener that is starch, 6.5% latex binder, 0.4% thickener that is acrylic emulsion, and water wherein the composition possesses viscosity of 450-650 Brabender units.

In light of the above, it is clear that Attard et al. anticipate the present claims.

17. Claims 1-2, 6-7, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Lakshmanan (U.S. 4,018,732).

Lakshmanan discloses coating composition for gypsum board. Attention is drawn to col.3, lines 36-45 and 53-55 and to col.5, lines 14-50 of Lakshmanan that discloses composition that is calculated to contain 33% acrylic emulsion, 29.8% calcium carbonate, 15.6% clay thickener, 0.99% asbestos fiber thickener, 3.3% clay, 0.099% sodium polyacrylate dispersant, 0.8% second dispersant, and water. Given that the only filler utilized is calcium carbonate, it is clear that the filler comprises 100% calcium carbonate.

In light of the above, it is clear that Lakshmanan anticipates the present claims.

18. Claims 1-2, 6-7, 9, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Green et al. (U.S. 5,552,187).

Attention is drawn to col.12, lines 1-19 of Green et al. that discloses coating for gypsum board wherein the coating comprises 47.08% styrene-acrylic dispersion, i.e. binder, 39.73% limestone filler, 1.6% clay pigment, 0.8% clay thickener, 0.09% sodium polyacrylate dispersant, and water. Given that the only filler utilized is calcium carbonate, it is clear that the filler comprises 100% calcium carbonate.

In light of the above, it is clear that Green et al. anticipate the present claims.

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19. Claims 1, 11, and 13 are rejected under 35 U.S.C. 102(e) as being anticipated by Immordino, Jr. et al. (U.S. 6,673,144).

Immordino, Jr. et al. disclose coating composition for drywall wherein the coating comprises 50-98% filler that is preferably 65-93% calcium carbonate but also includes gypsum, 2-6% binder including acrylic latex, thickener, and additional filler including up to 25% mica, up to 25% clay, and calcium sulfate anhydrite. It is disclosed that the coating possesses viscosity of 300-550 Brabender units, i.e. centipoise (col.1, lines 16-18, col.2, lines 49-63, col.6, lines 7-15 and 26-37, col.7, lines 10-32 and 39-51, and col.8, lines 50-64). Attention is drawn to example 5 that discloses coating comprising 73-76% calcium carbonate, 5% clay thickener, 5-8% latex adhesive, i.e. binder, and water.

In light of the above, it is clear that Immordino et al. anticipate the present claims.

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

21. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

22. Claims 3-5, 8-9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE 4324315 in view of Immordino, Jr. et al. (U.S. 6,673,144), Brown et al. (U.S. 4,178,273) and Crawford (U.S. 3,630,742).

The disclosure with respect to DE 4324315 in paragraph 13 above is incorporated here by reference.

The difference between DE 4324315 and the present claimed invention is the requirement in the claims of (a) anti-cracking agent and workability agent and (b) specific type and amount dispersant.

With respect to difference (a), Immordino, Jr. et al., which is drawn to coating composition for drywall, disclose the use of up to 25% mica in order to reduce the cracking of the composition as it dries, i.e. anti-cracking agent, and up to 25% clay in order to improve body and workability of the composition, i.e. workability agent (col.6, lines 26-34).

In light of the motivation for using mica anti-cracking agent and clay workability agent disclosed by Immordino, Jr. et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use mica and clay in DE 4324315 in order to produce coating with reduced cracking and good workability, and thereby arrive at the claimed invention.

With respect to difference (b), Brown et al., which is drawn to coating for gypsum wallboard, disclose the use of 2-7% dispersant including that known under the tradename Tamol 731 in order to form a stable dispersion or suspension of the water-insoluble ingredients in water (col.4, lines 41-53 and 65). It is well known, as disclosed by Crawford (col.3, lines 9-17), that Tamol 731 is sodium polyacrylate.

In light of the motivation for using specific type and amount of dispersant disclosed by Brown as described above, it therefore would have been obvious to one of ordinary skill in the art to use such dispersant as the dispersant in DE 4324315 in order to produce coating with stable dispersion, and thereby arrive at the claimed invention.

23. Claims 3-5 and 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Caldwell et al. (U.S. 5,869,166) in view of Immordino, Jr. et al. (U.S. 6,673,144).

The disclosure with respect to Caldwell et al. in paragraph 14 above is incorporated here by reference.

The difference between Caldwell et al. and the present claimed invention is the requirement in the claims of (a) anti-cracking agent and workability agent and (b) amount of calcium carbonate.

With respect to difference (a), Immordino, Jr. et al., which is drawn to coating composition for drywall, disclose the use of up to 25% mica in order to reduce the cracking of the composition as it dries, i.e. anti-cracking agent, and up to 25% clay in order to improve body and workability of the composition, i.e. workability agent (col.6, lines 26-34).

In light of the motivation for using mica anti-cracking agent and clay workability agent disclosed by Immordino, Jr. et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use mica and clay in Caldwell et al. in order to produce coating with reduced cracking and good workability, and thereby arrive at the claimed invention.

With respect to difference (b), Caldwell et al. disclose the use of 72.44% calcium carbonate while present claims 11-12 require about 75% calcium carbonate.

It is apparent, however, that the instantly claimed amount of calcium carbonate and that taught by Caldwell et al. are so close to each other that the fact pattern is similar to the one in *In re Woodruff*, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a “slight” difference in the ranges the court held that such a difference did not “render the claims patentable” or, alternatively, that “a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties”.

In light of the case law cited above and given that there is only a “slight” difference between the amount of calcium carbonate disclosed by Caldwell et al. and the amount disclosed in present claims 11-12, it therefore would have been obvious to one of ordinary skill in the art that the amount of calcium carbonate disclosed in present claims 11-12 is but an obvious variant

of the amounts disclosed in Caldwell et al., and thereby one of ordinary skill in the art would have arrived at the claimed invention.

24. Claims 2-4, 6, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Podlas (U.S. 5,102,462) in view of Brown et al. (U.S. 4,178,273) and Crawford (U.S. 3,630,742).

The disclosure with respect to Podlas in paragraph 15 above is incorporated here by reference.

The difference between Podlas and the present claimed invention is the requirement in the claims of dispersant.

Brown et al., which is drawn to coating for gypsum wallboard, disclose the use of 2-7% dispersant including that known under the tradename Tamol 731 in order to form a stable dispersion or suspension of the water-insoluble ingredients in water (col.4, lines 41-53 and 65). It is well known, as disclosed by Crawford (col.3, lines 9-17), that Tamol 731 is sodium polyacrylate.

In light of the motivation for using dispersant disclosed by Brown as described above, it therefore would have been obvious to one of ordinary skill in the art to use such dispersant in Podlas order to produce coating with stable dispersion, and thereby arrive at the claimed invention.

25. Claims 2-6, 9, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Attard et al. (U.S. 5,336,318) in view of Brown et al. (U.S. 4,178,273), Crawford (U.S. 3,630,742), and Immordino, Jr. et al. (U.S. 6,673,144).

The disclosure with respect to Attard et al. in paragraph 16 above is incorporated here by reference.

The difference between Attard et al. and the present claimed invention is the requirement in the claims of (a) dispersant and (b) workability agent.

With respect to difference (a), Brown et al., which is drawn to coating for gypsum wallboard, disclose the use of 2-7% dispersant including that known under the tradename Tamol 731 in order to form a stable dispersion or suspension of the water-insoluble ingredients in water (col.4, lines 41-53 and 65). It is well known, as disclosed by Crawford (col.3, lines 9-17), that Tamol 731 is sodium polyacrylate.

In light of the motivation for using dispersant disclosed by Brown as described above, it therefore would have been obvious to one of ordinary skill in the art to use such dispersant as the dispersant in Attard et al. in order to produce coating with stable dispersion, and thereby arrive at the claimed invention.

With respect to difference (b), Immordino, Jr. et al., which is drawn to coating composition for drywall, disclose the use of up to 25% clay in order to improve body and workability of the composition, i.e. workability agent (col.6, lines 26-34).

In light of the motivation for using clay workability agent disclosed by Immordino, Jr. et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use clay in Attard et al. in order to produce coating with good workability, and thereby arrive at the claimed invention.

26. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Attard et al. (U.S. 5,336,318) in view of Deodhar et al. (U.S. 6,663,979).

The disclosure with respect to Attard et al. in paragraph 16 above is incorporated here by reference.

The difference between Attard et al. and the present claimed invention is the requirement in the claims of additional filler.

Deodhar et al., which is drawn to coating for wallboard, disclose the use of magnesium carbonate in order to give the coating strength and resistance to hold up to sanding and allowing preparation of very smooth and uniform surface (col.5, lines 29-36).

In light of the motivation for using magnesium carbonate disclosed by Deodhar et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use magnesium carbonate in Attard et al. in order to produce coating with strength and resistance to sanding so that the coating produces very smooth and uniform surface, and thereby arrive at the claimed invention.

27. Claims 3-5, 8, and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakshmanan (U.S. 4,018,732) in view of Immordino, Jr. et al. (U.S. 6,673,144).

The disclosure with respect to Lakshmanan in paragraph 17 above is incorporated here by reference.

The difference between Lakshmanan and the present claimed invention is the requirement in the claims of (a) mica anti-cracking agent and (b) amount of acrylic latex binder.

With respect to difference (a), Immordino, Jr. et al., which is drawn to coating composition for drywall, disclose the use of up to 25% mica in order to reduce the cracking of the composition as it dries, i.e. anti-cracking agent(col.6, lines 26-34).

In light of the motivation for using mica anti-cracking agent disclosed by Immordino. Jr. et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use mica in Lakshmanan in order to produce coating with reduced cracking, and thereby arrive at the claimed invention.

With respect to difference (b), it is noted that the present claims require about 30% acrylic latex binder while Lakshmanan discloses the use of 33% acrylic latex binder.

It is apparent, however, that the instantly claimed amount of binder and that taught by Lakshmanan are so close to each other that the fact pattern is similar to the one in *In re Woodruff*, 919 F.2d 1575, USPQ2d 1934 (Fed. Cir. 1990) or *Titanium Metals Corp. of America v. Banner*, 778 F.2d 775, 227 USPQ 773 (Fed.Cir. 1985) where despite a “slight” difference in the ranges the court held that such a difference did not “render the claims patentable” or, alternatively, that “a prima facie case of obviousness exists where the claimed ranges and prior art ranges do not overlap but are close enough so that one skilled in the art would have expected them to have the same properties”.

In light of the case law cited above and given that there is only a “slight” difference between the amount of binder disclosed by Lakshmanan and the amount disclosed in the present claims, it therefore would have been obvious to one of ordinary skill in the art that the amount of binder disclosed in the present claims is but an obvious variant of the amount disclosed in

Lakshmanan, and thereby one of ordinary skill in the art would have arrived at the claimed invention.

28. Claims 3-4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (U.S. 5,552,187) in view of Immordino, Jr. et al. (U.S. 6,673,144).

The disclosure with respect to Green et al. in paragraph 18 above is incorporated here by reference.

The difference between Green et al. and the present claimed invention is the requirement in the claims of anti-cracking agent and workability agent.

Immordino, Jr. et al., which is drawn to coating composition for drywall, disclose the use of up to 25% mica in order to reduce the cracking of the composition as it dries, i.e. anti-cracking agent, and up to 25% clay in order to improve body and workability of the composition, i.e. workability agent (col.6, lines 26-34).

In light of the motivation for using mica anti-cracking agent and clay workability agent disclosed by Immordino, Jr. et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use mica and clay in Green et al. in order to produce coating with reduced cracking and good workability, and thereby arrive at the claimed invention.

29. Claims 2-9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Immordino, Jr. et al. (U.S. 6,673,144) in view of Brown et al. (U.S. 4,178,273) and Crawford (U.S. 3,630,742).

The disclosure with respect to Immordino, Jr. et al. in paragraph 20 above is incorporated here by reference,

The difference between Immordino, Jr. et al. and the present claimed invention is the requirement in the claims of dispersant.

Brown et al., which is drawn to coating for gypsum wallboard, disclose the use of 2-7% dispersant including that known under the tradename Tamol 731 in order to form a stable dispersion or suspension of the water-insoluble ingredients in water (col.4, lines 41-53 and 65). It is well known, as disclosed by Crawford (col.3, lines 9-17), that Tamol 731 is sodium polyacrylate.

In light of the motivation for using dispersant disclosed by Brown as described above, it therefore would have been obvious to one of ordinary skill in the art to use such dispersant in the coating of Immordino, Jr. et al. in order to produce coating with stable dispersion, and thereby arrive at the claimed invention.

30. Claims 14, 17-18, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Attard et al. (U.S. 5,336,318) in view of Brown et al. (U.S. 4,178,273) and Crawford (U.S. 3,630,742).

Attard et al. disclose coating for wallboard wherein the coating comprises 50-95% calcium carbonate, 0.1-2% in situ/associative thickener that is acidic acrylate copolymer such as ethyl acrylate/methacrylic acid copolymer, 1-7% binder that is latex emulsion, 0.05-5% starch binder, 2-15% mica, and water wherein the coating possesses viscosity of 400-700 Brabender units, i.e. centipoise (col.1, lines 12-32, col.3, lines 20-45 and 57-63, col.4, lines 1-4, 24-33, 57,

and 64-66, and col.6, lines 7-15). Attention is drawn to example 6 of Attard et al. that discloses coating for gypsum wallboard wherein the coating comprises 79.15% calcium carbonate, 0.4% thickener that is starch, 6.5% latex binder, 0.4% thickener that is acrylic emulsion, and water wherein the composition possesses viscosity of 450-650 Brabender units.

The difference between Attard al. and the present claimed invention is the requirement in the claims of dispersant.

Brown et al., which is drawn to coating for gypsum wallboard, disclose the use of 2-7% dispersant including that known under the tradename Tamol 731 in order to form a stable dispersion or suspension of the water-insoluble ingredients in water (col.4, lines 41-53 and 65). It is well known, as disclosed by Crawford (col.3, lines 9-17), that Tamol 731 is sodium polyacrylate.

In light of the motivation for using dispersant disclosed by Brown as described above, it therefore would have been obvious to one of ordinary skill in the art to use such dispersant in the coating of Attard et al. in order to produce coating with stable dispersion, and thereby arrive at the claimed invention.

31. Claims 15-16 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Attard et al. in view of Brown and Crawford as applied to claims 14, 17-18, and 20-21 above, and further in view of Immordino, Jr. et al. (U.S. 6,673,144).

The difference between Attard et al. in view of Brown and Crawford and the present claimed invention is the requirement in the claims of workability agent.

Immordino, Jr. et al., which is drawn to coating composition for drywall, disclose the use of up to 25% clay in order to improve body and workability of the composition, i.e. workability agent (col.6, lines 26-34).

In light of the motivation for using clay workability agent disclosed by Immordino, Jr. et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use clay in Attard et al. in order to produce coating with good workability, and thereby arrive at the claimed invention.

32. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Attard et al. in view of Brown and Crawford as applied to claims 14, 17-18, and 20-21 above, and further in view of Deodhar et al. (U.S. 6,663,979).

The difference between Attard et al. in view of Brown and Crawford and the present claimed invention is the requirement in the claims of additional filler.

Deodhar et al., which is drawn to coating for wallboard, disclose the use of magnesium carbonate in order to give the coating strength and resistance to hold up to sanding and allowing preparation of very smooth and uniform surface (col.5, lines 29-36).

In light of the motivation for using magnesium carbonate disclosed by Deodhar et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use magnesium carbonate in Attard et al. in order to produce coating with strength and resistance to sanding so that the coating produces very smooth and uniform surface, and thereby arrive at the claimed invention.

33. Claims 14-19 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Immordino, Jr. et al. (U.S. 6,673,144) in view of Brown et al. (U.S. 4,178,273) and Crawford (U.S. 3,630,742).

Immordino, Jr. et al. disclose coating composition for drywall wherein the coating comprises 50-98% filler that is preferably 65-93% calcium carbonate but also includes gypsum, 2-6% binder including acrylic latex, thickener, and additional filler including up to 25% mica, up to 25% clay, and calcium sulfate anhydrite. It is disclosed that the coating possesses viscosity of 300-550 Brabender units, i.e. centipoise (col.1, lines 16-18, col.2, lines 49-63, col.6, lines 7-15 and 26-37, col.7, lines 10-32 and 39-51, and col.8, lines 50-64). Attention is drawn to example 5 that discloses coating comprising 73-76% calcium carbonate, 5% clay thickener, 5-8% latex adhesive, and water.

The difference between Immordino, Jr. et al. and the present claimed invention is the requirement in the claims of dispersant.

Brown et al., which is drawn to coating for gypsum wallboard, disclose the use of 2-7% dispersant including that known under the tradename Tamol 731 in order to form a stable dispersion or suspension of the water-insoluble ingredients in water (col.4, lines 41-53 and 65). It is well known, as disclosed by Crawford (col.3, lines 9-17), that Tamol 731 is sodium polyacrylate.

In light of the motivation for using dispersant disclosed by Brown as described above, it therefore would have been obvious to one of ordinary skill in the art to use such dispersant in the coating of Immordino, Jr. et al. in order to produce coating with stable dispersion, and thereby arrive at the claimed invention.

34. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zuber et al. (U.S. 2003/0084633) disclose coating comprising 50-85% calcium carbonate, acrylic latex binder, and dispersant, however, the coating comprises cellulosic thickener.

WO 02/058902 discloses coating comprising water, 30-90% calcium carbonate, mica, and clay, however, the coating comprises cellulosic thickener.

John et al. (U.S. 2003/0085306) discloses apparatus for spray coating substrate with no disclosure or suggestion of coating as presently claimed.

EP 1182235, which is cumulative to the rejections of record set forth above, disclose coating comprising polymer, rheology modifier, 2-25% calcium carbonate filler, dispersant, and mica.

Thaler et al. (U.S. 4,859,248) discloses that 1 Brabender unit is approximately 1 cps.

Randall et al. (U.S. 2004/0209074) disclose coating for gypsum board comprising water, calcium carbonate, and acrylic binder latex.

Kyte et al. (U.S. 2005/0065256) disclose composition for group that comprises calcium carbonate, acrylic latex, sodium polyacrylate dispersant, and thickener.

35. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Callie E. Shosho
Primary Examiner
Art Unit 1714

CS
4/27/07